

Customer No.: 31561
Application No.: 10/708,198
Docket No.: 10767-US-PA

AMENDMENT

To the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (currently amended) A driving circuit of a current-driven active matrix organic light emitting diode (AMOLED), comprising:

an AMOLED pixel connected to a current source, the current source being used to charge/discharge a capacitor connected to a gate of a driving thin film transistor, and a gray scale of the AMOLED pixel is determined by a magnitude of a current provided by the current source; and

a pre-charge switch connected to the gate of the driving thin film transistor and a driving power source, for controlling the driving power source to pre-charge the capacitor before the current source charges/discharges the capacitor, wherein the AMOLED pixel further comprises:

an organic light emitting diode (OLED) having an anode and a cathode,
the cathode being connected to a first power source;

a first switch with one end connected to the anode of the OLED and

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another end connected to a drain of the driving thin film transistor;

a second switch with one end connected to the current source and another end connected to the drain of the driving thin film transistor; and

a third switch with one end connected to the drain of the driving thin film transistor and another end connected to the gate of the driving thin film transistor and one end of the capacitor, the other end of the capacitor being connected to a second power source.

Claims 2-6. (cancelled)

Claim 7. (currently amended) The driving circuit of claim [[6]]1, wherein the first, the second, the third switches, the driving thin film transistor, and the pre-charge switch are P-type thin film transistors.

Claim 8. (withdrawn - currently amended) The driving circuit of claim [[6]]1, wherein the first, the second, the third switches and the pre-charge switch are N-type thin film transistors.

Claim 9. (currently amended) The driving circuit of claim [[6]]1, wherein [[the]]a negative power source is used as the driving power source.

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Claim 10. (currently amended) The driving circuit of claim 1, wherein a pre-charged voltage level across the capacitor is ~~[[about]]~~ substantially equal to a threshold voltage of the thin film transistor.

Claim 11. (original) The driving circuit of claim 1, wherein the driving power source comprises two different voltage levels.

Claim 12. (currently amended) A method for driving a current-driven active matrix organic light emitting diode (AMOLED) pixel, wherein ~~an AMOLED pixel is connected to a current source and a driving power source for charging/discharging a pre-charge switch is connected between a gate of a driving thin film transistor of an AMOLED pixel and a driving power source, and a capacitor is connected to~~ [[a]]the gate of [[a]]the driving thin film transistor of the AMOLED pixel, the method comprising the steps of:

directly pre-charging the capacitor through the pre-charge switch by using the driving power source;

adjusting a gray-scale charging voltage of the capacitor by using the current source; and

stopping charging/discharging the capacitor through the current source to control the AMOLED pixel to enter an illumination stage.

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Claim 13. (currently amended) The method of claim 12, wherein the capacitor is pre-charged to a voltage that is ~~[[about]]~~ substantially equal to a threshold voltage of the thin film transistor.

Claim 14. (original) The method of claim 12, wherein the driving power source comprises two different voltage levels.

Claim 15. (new) The driving circuit of claim 1, wherein the first power source is negative polarity.

Claim 16. (new) The driving circuit of claim 1, wherein the second power source is positive polarity.